AMENDMENT NO. 1 JUNE 2017
TO
IS 16544 : 2016 ALL GLASS EVACUATED TUBES SOLAR WATER HEATING SYSTEM

(*Page* 4, *Annex* A) — Substitute the following for the existing annex:

ANNEX A
(*Clause* 5.4)

SYSTEM SIZING — CAPACITY WISE NUMBER OF EVACUATED TUBES AND CORRESPONDING COLLECTOR AREA IN SOLAR WATER HEATING SYSTEM WITH TUBES

All dimensions in millimetres

Sl No.	**System Capacity (SC),** LPD	**Minimum Number of Evacuated Tube to be Provided in the System**												**Collector Area, in m^2**
		Outer Tube Size Diameter =47				Outer Tube Size Diameter=58				Outer Tube Size Diameter=70				
		Tube Length, *L*				Tube Length, *L*				Tube Length, *L*				
		L=1500	*L*=1800	*L*=2000	*L*=2100	*L*=1500	*L*=1800	*L*=2000	*L*=2100	*L*=1500	*L*=1800	*L*=2000	*L*=2100	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
i)	50	7	6	5	5	6	5	4	4	5	4	3	3	0.75
ii)	75	11	9	8	8	9	7	6	6	7	6	5	5	1.13
iii)	100	15	12	11	10	12	10	9	8	9	8	7	7	1.50
iv)	150	22	18	16	16	17	14	13	12	14	12	10	10	2.25
v)	200	29	24	22	21	23	19	17	16	19	16	14	13	3.00
vi)	250	36	30	27	26	29	24	21	20	23	19	17	17	3.75
vii)	300	40	34	30	29	32	27	24	23	26	22	19	18	4.50
viii)	400	54	45	40	38	43	35	32	30	35	29	26	25	6.00
x)	500	67	56	50	48	53	44	40	38	43	36	32	31	7.50

NOTES

1 The minimum collector area per 100 litre per day should be 1.5 m^2.

2 Calculation of minimum absorber area for different tube sizes (A_A)

$A_A = 3.14 \text{ x } d \text{ x } L_1$

Where d = Inner diameter of tube, $L_1 = L - D/2$, L = Length of tube and D = Outer diameter of tube.

3 Calculation for minimum number of tubes for the heating system

Minimum number of tubes = Minimum collector area / (C X A_A)

(Where A_A is minimum absorber area of tube collector, C =0.60 when $50 \leq SC \leq 250$; C = 0.65 when $250 < SC \leq 500$, SC = System capacity in LPD).

4 Solar water heating system having capacities other than as given in above table may be manufactured having minimum number of tube as per formula given at Sl No. i) to iii) and shall conform with the requirements of this standard.

(MED 04)

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